

IN THE CLAIMS:

Please cancel Claim 13 without prejudice or disclaimer of subject matter and amend the claims as shown below. The claims, as currently pending in the application, read as follows.

1. (Currently Amended) An interface apparatus for inputting information from an external apparatus, comprising:

a first circuit for, in a case where there is a change in information input from the external apparatus, fetching the information after an elapse of a predetermined time; and

a second circuit for[[,]] determining whether the information fetched by the first circuit matches a protocol of the information input from the external apparatus, and when the information fetched by ~~said the~~ first circuit is not matched with the protocol of the information input from the external apparatus, ~~skipping outputting the~~ fetched information ~~according to the protocol~~,

wherein, when the information fetched by the first circuit is not matched with the protocol of the information input from the external apparatus, the second circuit does not output the fetched information.

2. (Previously Presented) An apparatus according to claim 1, wherein said first circuit comprises:

a change detector for outputting a reset in the case where there is a change in the information input from the external apparatus;

a timer for inputting the reset output by the change detector and outputting a trigger after the elapse of the predetermined time from the input of the reset; and

a latch for inputting the trigger output by the timer and fetching the information.

3. (Previously Presented) An apparatus according to claim 1, wherein the external apparatus forms the information such that information is non-continuous information.

4. (Previously Presented) An apparatus according to claim 1, wherein the information which is input from the external apparatus is input to the first circuit and the information fetched by said first circuit is input to the second circuit.

5. (Currently Amended) A printer comprising:

a first circuit for, in a case where there is a change in information input from an external apparatus, fetching the information after an elapse of a predetermined time;

a second circuit for[[,]] determining whether the information fetched by the first circuit matches a protocol of the information input from the external apparatus, and when the information fetched by the first circuit is not matched with the protocol of the information input from the external apparatus, ~~skipping outputting~~ the fetched information, wherein, when the information fetched by the first circuit is not matched with the protocol of the information input from the external apparatus, the second circuit does not output the fetched information; and

a printer engine for printing the information ~~fetched by the first circuit if it is determined by the second circuit that the information fetched by the first circuit matches the protocol of the information input from the external apparatus~~ output by the second circuit.

6. (Currently Amended) An information processing method for inputting information from an external apparatus, comprising:

a first step of, in a case where there is a change in information input from the external apparatus, fetching the information after an elapse of a predetermined time; and

a second step of[[,]] determining whether the information fetched by the first step matches a protocol of the information input from the external apparatus, and when the information fetched by the first step is not matched with the protocol of the information input from the external apparatus, skipping outputting the fetched information according to the protocol,

wherein, when the information fetched in the first step is not matched with the protocol of the information input from the external apparatus, the second step does not output the fetched information.

7. (Previously Presented) A method according to claim 6, wherein said first step comprises:

a change detecting step of outputting a reset in the case where there is a change in the information input from the external apparatus;

a timer step of inputting the reset output by the change detecting step and outputting a trigger after the elapse of the predetermined time from the input of the reset; and

a latch step of inputting the trigger output by the timer step and fetching the information.

8. (Previously Presented) A method according to claim 6, wherein the external apparatus forms the information such that same information does not continue.

9. (Previously Presented) A method according to claim 6, wherein the first step is executed by a glitch noise filter and the second step is executed by a logical filter.

10. (Currently Amended) A printing method comprising:

a first step of, in a case where there is a change in information input from an external apparatus, fetching the information after an elapse of a predetermined time;

a second step of determining whether the information fetched in the first step matches a protocol of the information input from the external apparatus, and when the information fetched by in the first step is not matched with the protocol of the information input from the external apparatus, skipping outputting the fetched information, and wherein, when the information fetched in the first step is not matched with the protocol of the information input from the external apparatus, the second step does not output the fetched information; and

a step of printing the information ~~fetched by the first step if it is determined by the second step that the fetched information matches the protocol of the information input from the external apparatus~~ output in the second step.

11. (Previously Presented) An apparatus according to claim 1, wherein, if the fetched information continuously repeats a same value, said second circuit skips the fetched information.

12. (Previously Presented) A method according to claim 6, wherein, if the fetched information continuously repeats a same value, said second step skips the fetched information.

13. (Canceled)

14. (Currently Amended) An interface apparatus for inputting information from an external apparatus, comprising:

a change detector for detecting a change in information input from the external apparatus and outputting a reset upon the detection of the change;

a timer for inputting the reset output by said change detector and outputting a trigger after an elapse of a predetermined time from the input of the reset;

a latch for inputting the trigger output by said timer and fetching information input from the external apparatus upon the input of the trigger; and

a logical filter for ~~for~~ determining whether the information fetched by the latch matches a protocol of the information input from the external apparatus, and when the

information fetched by said latch is matched with the protocol of the information input from the external apparatus, outputting the fetched information, and wherein, when the information fetched by said latch is not matched with the protocol of the information input from the external apparatus, said logical filter does not output the fetched information.

15. (Currently Amended) An interface apparatus for inputting information from an external apparatus, comprising:

a timer for timing a predetermined time; and

a comparator for making a comparison between a length of a low level state in input information input from the external apparatus within the predetermined time timed by said timer, and a length of a high level state in the input information within the predetermined time, and for outputting a low level signal if the comparison shows that the length of the low level state is longer than the length of the high level state, and outputting a high level signal if the comparison shows that the length of the high level state is longer than the length of the low level state; and

a logical filter for determining whether information indicated by the signal output by said comparator matches a protocol of the information input from the external apparatus, and when the information indicated by the signal output by said comparator is matched with the protocol of the information input from the external apparatus, outputting the indicated information. and

wherein, when the information indicated by the signal output by said comparator is not matched with the protocol of the information input from the external apparatus, said logical filter does not output the indicated information.

16. (Previously Presented) An apparatus according to claim 15, wherein said timer outputs a trigger after an elapse of the predetermined time from a delimiter existing in the input information, and said comparator inputs the trigger and makes the comparison in accordance with the trigger.